

REMARKS

Claims 61-62, and 66-69 remain in the application. Claims 1-60 and 63-65 were previously canceled without prejudice to further prosecution. Claims 61, 66 and 69 are hereby amended. No new matter is being added.

35 USC 103 (a)

Claims 61-62, and 66-69 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Ose et al. in view of Talbot (USP 6,252,412). Applicants respectfully traverse this rejection in regards to claims 61-62 and 66-69 as hereby amended.

Claim 61 as amended now recites as follows.

61. A method of imaging a substrate in a dual-beam secondary electron emission microscope primarily with secondary electrons, comprising:
 - a) exposing said substrate to a dual beam comprising an influx of relatively high-energy electrons, said high-energy electrons having an energy selected to cause secondary electrons to leave said substrate, and an influx of relatively low-energy electrons, said electrons having a sufficiently low energy so that a substantial portion of said electrons are reflected from a surface of said substrate and both an energy and a current density profile selected to maintain surface charge present on said substrate at a predetermined level, **wherein said influxes of high-energy and low-energy electrons are provided at a same time in said dual beam,**
 - b) filtering the flux of said secondary electrons and said low-energy electrons reflected from the surface of said substrate in order to select most or all of said secondary electrons, or a portion of said secondary electrons, and to reject most or all of said reflected electrons,
 - c) focusing said secondary electrons to create an image of said substrate in a plane of a detector, and
 - d) detecting said secondary electrons, thereby imaging a portion of said substrate.

(Emphasis added.)

As now recited explicitly in claim 61, the influxes of high-energy and low-energy electrons are provided **at a same time** in the dual energy beam. In addition, **filtering** is used to select secondary electrons (generated by the influx of high-energy electrons) and reject reflected electrons (generated by the influx of low-energy electrons).

Neither Ose et al. nor Talbot et al. disclose or suggest the claimed invention. As discussed by the Examiner, Ose et al. fails to teach the use of a second electron beam.

Talbot et al. discloses an “in-the-lens” flood gun. However, Talbot et al. discloses that the flood beam and the imaging beam are **multiplexed** to irradiate the specimen semiconductor at the **different** times, and that the flood beam is used only for **pre-charging** the semiconductor specimen. In particular, Talbot et al. teaches “a flood-beam bending electrode 620 that allows fast multiplexing between a broad, high-current flood beam for pre-charging the specimen and its conductors, and a high-resolution primary-imaging beam for fast imaging” (Column 9, lines 32-35.) Because the flood beam is used for pre-charging in Talbot et al., filtering between secondary and reflected electrons is **not** needed.

For the above-discussed reasons, applicant respectfully submits that claim 61, as amended, is now patentably distinguished over Ose et al. in view of Talbot et al.

Claim 62 depends from claim 61. Hence, for at least the same reasons discussed above in relation to claim 61, claim 62 is now also patentably distinguished over the cited art.

Claim 66 is amended similarly to claim 61. Claim 66, as amended, now also explicitly recites that the influxes of high-energy and low-energy electrons are provided at a **same time** in the dual energy beam. **Filtering** between secondary and reflected electrons is also required in claim 66. Hence, for at least the same reasons discussed above in relation to claim 61, claim 66 is now also patentably distinguished over Ose et al. in view of Talbot et al.

Claims 67 and 68 depend from claim 66. Hence, for at least the same reasons discussed above in relation to claim 66, claims 67 and 68 are now also patentably distinguished over the cited art.

Claim 69 is amended similarly to claim 61. Claim 69, as amended, now also explicitly recites that the influxes of high-energy and low-energy electrons are provided at a **same time** in the dual energy beam. **Filtering** between secondary and reflected electrons is also required in claim 69. Hence, for at least the same reasons discussed above in relation to claim 61, claim 66 is now also patentably distinguished over Ose et al. in view of Talbot et al.

Conclusion

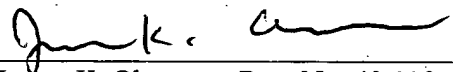
For the above-discussed reasons, applicants believe that remaining 61-62, and 66-69, as now amended, are patentably distinguished over the cited art. Favorable action is respectfully requested.

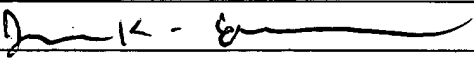
The examiner is also invited to call the below-referenced attorney to discuss this case.

Respectfully Submitted,

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